

Corning® 5L Erlenmeyer Aseptic Transfer Cap for Transfer by Vacuum or Positive Pressure

User Guide

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Introduction

The Corning 5L Erlenmeyer Aseptic Transfer Cap (ATC) accessory allows you to fill or empty the Corning 5L Erlenmeyer flask in a closed environment. Fluid is moved by positive or negative pressure via a vacuum pump to fill (apply a vacuum) or empty (pressurize) the cell culture vessel.

Materials

- ▶ Corning 5L Erlenmeyer aseptic transfer cap (Cat. No. 11500) and Corning 5L Erlenmeyer flask (Cat. No. 431685 or 431684) or Corning 5L Erlenmeyer with aseptic transfer cap (Cat. No. 11501 or 11502)
- ▶ Low vacuum/pressure pump
- ▶ Media bag or other container with female medical plastic coupler (MPC)
- ▶ Syringe with a male Luer lock connection fitting
- ▶ Alcohol wipes

Method

Attaching the Aseptic Transfer Cap

Skip to “Filling 5L Erlenmeyer Flask” if using the 5L Erlenmeyer flask with the ATC already attached.

1. Using aseptic techniques and working under sterile conditions, remove the Erlenmeyer flask and ATC from packaging.
2. Aseptically remove the 5L Erlenmeyer standard cap and replace it with the ATC. Avoid contaminating the dip tube.
3. Tighten the ATC onto the Erlenmeyer flask.

Filling 5L Erlenmeyer Flask

1. Using aseptic techniques and working under sterile conditions, connect the male MPC on the ATC to the female MPC on the vessel containing cell culture medium with cells.
Note: Alternatively, the ATC tubing can be welded to the tubing of the source vessel.
2. Adjust the regulator to vacuum setting. Set the regulator to no more than 2.5 inches of mercury (in Hg). This should result in a flow rate of approximately 1L/min.
3. Connect the pump tubing to the 0.2 μm vent filter on the ATC.
4. Turn on the pump to create vacuum on the 5L Erlenmeyer flask and pull the fluid into the flask via the dip tube of the ATC.
5. Turn off the pump after the appropriate volume has been transferred.
6. Disconnect the pump tubing from the ATC vent filter.
7. Disconnect the ATC from the source container.
8. Recap MPC to maintain sterility. Liquid transfer is complete.

Sampling from 5L Erlenmeyer Flask

1. To aseptically sample from the 5L flask, use an alcohol wipe to thoroughly disinfect the needleless sample port.
2. Attach a 10 mL or larger male syringe with Luer lock connection to the sample port.
3. While holding sample port, pull back the syringe until the liquid fills the dip tube and reaches the syringe.
4. After the desired volume for sample processing is collected, remove the syringe from the sample port.
5. Use an alcohol wipe to remove any residual liquid that remains after collecting the sample.

Emptying 5L Erlenmeyer Flask

1. Using aseptic techniques and working in aseptic conditions, connect the male MPC on the ATC to a female MPC on the vessel receiving the cell culture.
2. Connect the pump tubing to the 0.2 μm vent filter on the ATC.
3. Adjust the regulator to pressurize setting. Set the regulator to no more than 1.25 pounds per square inch (psi). This should result in a flow rate of approximately 1L/min.
4. Turn the pump on to pressurize the 5L flask and push the fluid up the dip tube of the ATC into the receiving vessel.
Note: You will need to tip the 5L flask to transfer all liquid into the receiving vessel.
5. Turn off the pump once the appropriate volume of fluid is transferred into the receiving vessel.
6. Disconnect the ATC from the receiving vessel.
7. Recap the MPC to maintain sterility. Liquid transfer is complete.

Frequently Asked Questions

Q: When using a regulator at the recommended settings, what is the flow rate of liquid in and out of the vessel with an MPC?

A. On average, the flow rate is approximately 1L per minute.

Q: What is the volume retained in the dip tube after taking a syringe sample?

A. Approximately 6 mL volume is retained.

Q: Can I tube weld the ATC instead of using the MPC?

A. Yes.

Q: Can cells be cultured while the aseptic transfer cap is attached to the vessel?

A. Yes, there is a 0.2 μm filter on the aseptic transfer cap for gas exchange.

Q: I turned on the pump but there is no flow of liquid, what do I do?

A. Make sure the transfer cap is on tight to hold pressure and vacuum.

Q: What is the minimum size syringe required to take a sample from the sample port?

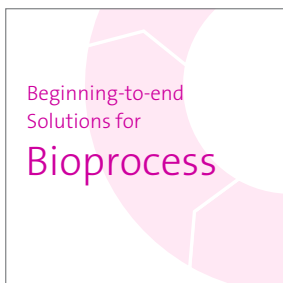
A. 10 mL.

Q: Can I apply a vacuum higher than 2.5 inches of mercury to the vessel to fill it faster?

A. We do not recommend increasing the vacuum to the vessel to greater than 2.5 inches of mercury. The 5L flask could collapse if the air flow out of the vessel is faster than the liquid flow rate into the vessel.

Q: Can the ATC tubing withstand a peristaltic pump?

A. Yes.



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Corning single-use adhesion and suspension cell culture products enable scale-up in bioprocess manufacturing. From cell line development and process development to GMP manufacturing, our vessels provide the necessary platform to accomplish your goals. Supporting products such as closed system solutions, media, and advanced surfaces round out the product offering, providing a complete solution.

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